

Notice of Allowability

Application No.

10/713,063

Examiner

Raquel Y. Gordon

Applicant(s)

SILVERBROOK, KIA

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

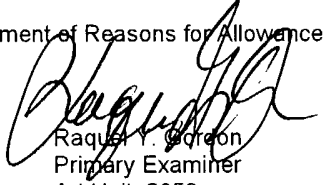
1. ☒ This communication is responsive to application filed 11/17/2003.
2. ☒ The allowed claim(s) is/are 1-7.
3. ☒ The drawings filed on 17 November 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/966,289.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 11/17/2003
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Raquel Y. Gordon
Primary Examiner
Art Unit: 2853

Reasons for allowance

The following is a statement of reasons for allowance:

Upon consideration, the inclusion of the claimed inkjet chip, as claimed in the combination, is not found in the prior art. This difference is considered patentable over the prior art and reflects an improvement in the field of endeavor since the following apparatus and method claim limitations reflect an improvement in the field of endeavor and over the prior art of record.

The Examiner has conducted an exhaustive updated search but has found no prior art to indicate this invention is neither novel nor non-obvious.

The primary reasons for allowance is the following claimed combination is not found in the prior art of record:

1. An inkjet printhead chip that comprises
a substrate that incorporates drive circuitry;
a plurality of nozzle arrangements that are positioned on the substrate, each nozzle arrangement comprising:
a nozzle chamber wall and a roof wall positioned on the substrate to
define a nozzle chamber, the roof wall defining an ink ejection port in fluid
communication with the nozzle chamber;
an ink ejection member that is positioned in the nozzle chamber and is
displaceable towards and away from the ink ejection port to eject ink from the
ink ejection port; and

an elongate actuator that is fast, at one end, to the substrate to receive an electrical signal from the drive circuitry and fast, at an opposite end, with the ink ejection member, the actuator incorporating a heating circuit that is connected to the drive circuitry layer the heating circuit being positioned and configured so that, on receipt of, and termination of, a suitable electrical drive signal from the drive circuitry layer, **the heating circuit serves to generate differential thermal expansion and contraction, respectively, such that the actuator is displaced to drive the ink ejection member towards and away from the ink ejection port wherein the drive circuitry is configured to generate a heating signal which is sufficient to heat the actuator, without generating movement, to an extent such that the ink is heated, prior to generating the drive signal.**

While Silverbrook (US 20030020786A1) teaches a similar invention (see page 8, paragraph 0233), this reference teaches the actuators are preheated "above" a temperature of operation. Contrarily, the claims are directed to preheating an actuator to a sufficient temperature **without generating movement**. Hence, the base claim is deemed to be allowed. The dependent claims are allowed since they depend from an allowed base claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

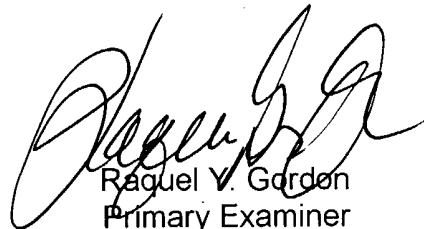
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Contact Information

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Raquel Y. Gordon, whose telephone number is (571) 272-2145. The Examiner can normally be reached on M Tu Th and F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. A fax number is available upon request.

Any inquiry of a general nature or relating to the status of this application or proceeding may be directed to the Examiner or Supervisor.



Raquel Y. Gordon
Primary Examiner
Art Unit 2853
May 12, 2004